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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,471	03/16/2007	Jens Doppelhamer	1034193-000054	5185

21839 7590 02/22/2010
BUCHANAN, INGERSOLL & ROONEY PC
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER	
NICKERSON, JEFFREY L	

ART UNIT	PAPER NUMBER
2442	

NOTIFICATION DATE	DELIVERY MODE
02/22/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/587,471	DOPPELHAMER ET AL.	
	Examiner	Art Unit	
	JEFFREY NICKERSON	2442	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 November 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to Application No. 10/587,471 filed on nationally on 16 March 2007 and internationally on 28 January 2005. The response presented on 23 November 2009, which amends claims 9-15, adds claims 16-20, provides replacement drawings, and presents arguments, is hereby acknowledged. Claims 9-20 are currently pending and have been examined.

Drawings

2. The replacement drawing presented on 23 November 2009 is accepted. All outstanding objections to the drawings are hereby withdrawn.

35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Response to Arguments

4. Applicant's arguments and amendments, filed in the response dated 23 November 2009, regarding the rejections under 35 USC 112 have been fully considered and are persuasive. All outstanding rejections under 35 USC 112, second paragraph, are hereby withdrawn.

35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Response to Arguments

5. Applicant's arguments, filed in the response dated 23 November 2009, with regard to the rejections under 35 USC 103(a) have been fully considered and are deemed persuasive. All outstanding rejections under 35 USC 103(a) are hereby withdrawn. However, new rejections may appear below.

Claim Rejections

6. Claims 9, 11-13, 16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauch et al (US 2004/0177359); and in further in view of Krishnamurthy (US 6,578,113 B2), Shakib et al (US 6,321,274 B1), and Wei (US 5,778,228).

Regarding claim 9, Bauch teaches a system for communication between remote objects which are associated with service providers (Bauch: Figure 1, application servers); wherein said remote objects are configured to be accessed as web services (Bauch:

[0002]-[0003]), and client-end local interfaces associated with a client in a computer network (Bauch: Figure 2, items 221-223 application agents), said system comprising:

a general service (PAN's server's core) installed, in addition to existing services (applications), at the service provider, and being configured to switch one or more service requests from a client to at least one service among the existing services, and to transmit one or more response messages to the client (Bauch: Figure 3, PAN's server's core, APIs, transforming modules, etc; [0034]; Figure 6, [0041]);

an optimization layer (PAN client's core) implemented at the client in addition to the local interfaces (application agents), and containing at least one cache having stored thereon messages relating to requests (Bauch: Figure 5; [0039]-[0040] provides for storing outgoing service calls for groupings), the optimization layer being configured to receive requests from at least one client application via at least one of the local interface (Bauch: Figure 4; [0035]-[0038] for receiving requests from applications at client core), and to combine received requests into at least one request group (Bauch: Figure 5; [0039]-[0040] for grouping requests to same server);

a general proxy (pan client's network module), to carry out grouped requests, and to return response messages received from the service provider to the optimization layer (Bauch: Figures 2, 4-5, [0029]-[0033]; [0035]-[0048]);

wherein the optimization layer is configured to evaluate the response messages received by the general proxy before passing the response messages to a client application via a local proxy (Bauch: Figure 9; [0044] provides for unpackaging grouped responses); and

wherein the optimization layer cache is a proxying cache (Bauch: Figure 2, item 210; [0032]-[0033] provides the core acts as a proxy).

Bauch does not teach wherein the requests are service calls;

wherein the local interfaces are proxy stubs; or

wherein a cache stores therein response messages to requests, and to determine whether a received request is addressed by at least one response message stored in the at least one cache, to at least one delay and suppress transmission of a received request upon determining that the received request is addressed by at least one response message stored in the at least one cache.

Krishnamurthy, in a similar field of endeavor, teaches wherein the cache stores therein response messages to requests (Krishnamurthy: Figure 1, item 110; col 1, lines 34-54 provides for proxy caches storing responses), and to determine whether a received request is addressed by at least one response message stored in the at least one cache (Krishnamurthy: Figure 3, steps 301-302; col 3, lines 51-67), to at least one delay and suppress transmission of a received request upon determining that the received request is addressed by at least one response message stored in the at least one cache (Krishnamurthy: Figure 3, steps 302 to 303 to 304; col 3, line 51 – col 4, line 21 provides the cached copy, if it exists and is valid, is returned and the request is dropped).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Krishnamurthy for piggybacking validation requests and caching responses. The teachings of Krishnamurthy, when implemented

in the Bauch system, will allow one of ordinary skill in the art to piggyback cache validation requests onto bundled client requests and to cache responses at the optimization layer. One of ordinary skill in the art would be motivated to utilize the teachings of Krishnamurthy in the Bauch system in order to reduce network traffic while maintaining cache coherency, and further apply known proxying techniques to the optimization layer.

The Bauch/Krishnamurthy system does not teach wherein the requests are service calls; or

wherein the local interfaces are proxy stubs.

Shakib, in a similar field of endeavor, teaches wherein the requests are service calls (Shakib: abstract; Figure 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Shakib for using RPCs. The teachings of Shakib, when implemented in the Bauch/Krishnamurthy system, will allow one of ordinary skill in the art to utilize the system in an RPC environment. One of ordinary skill in the art would be motivated to utilize the teachings of Shakib in the Bauch/Krishnamurthy system in order to practice the system in an RPC environment.

The Bauch/Krishnamurthy/Shakib system does not teach wherein the local interfaces are proxy stubs.

Wei, in a similar field of endeavor, teaches wherein the local interfaces are proxy stubs (Wei: abstract; Figure 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Wei for using proxy stubs. The teachings of Wei, when implemented in the Bauch/Krishnamurthy/Shakib system, will allow one of ordinary skill in the art to utilize the system in an RPC environment with stubs. One of ordinary skill in the art would be motivated to utilize the teachings of Wei in the Bauch/Krishnamurthy/Shakib system in order to practice the system in a known RPC environment.

Regarding claim 11, the Bauch/Krishnamurthy/Shakib/Wei system teaches wherein the client is configured to, by means of the optimization layer and general proxy, update and invalidate the response messages stored in the cache (Krishnamurthy: abstract), to request piggyback information together with the transmission of call groups (Krishnamurthy: abstract; Figure 3 item 306 for piggyback validation requests on client requests; Bauch: Figure 5 for requests being grouped requests), and to manage the reverse transmission of the response messages to the service provider (Bauch: Figure 9).

Regarding claim 12, this claim contains limitations found within that of claim 9, and the same rationale of rejection is used, where applicable; and

wherein the optimization layer is designed to update and invalidate data in the cache (Krishnamurthy: abstract).

Regarding claim 13, this method claim contains limitations found within claim 11, and the same rationale of rejection is used, where applicable.

Regarding claim 16, the Bauch/Krishnamurthy/Shakib/Wei system teaches wherein the optimization layer is configured to group service calls not addressed by at least one response messaged recorded in the at least one cache into at least one call group (Krishnamurthy: Figure 3, step 305-307 for continuing request transmission for requests not addressed by one of the cached responses; Bauch: Figure 5 for wherein transmission requests are optimization layer grouping calls).

Regarding claim 18, this claim contains limitations found within that of claim 16, and the same rationale of rejection is used, where applicable.

7. Claims 10, 14-15, 17, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauch et al (US 2004/0177359); in view of Krishnamurthy et al (US 6,578,113 B2), Shakib et al (US 6,321,274 B1) and Wei (US 5,778,228); and in further view of Kumar et al (US 7,130,890 B1).

Regarding claim 10, the Bauch/Krishnamurthy/Shakib/Wei system teaches wherein the client is designed by means of an optimization layer and the general proxy to initiate communication with a service provider (Bauch: abstract; Figures 4-5).

The Bauch/Krishnamurthy/Shakib/Wei system does not teach initiating communication without any call from a client application in order to update stored information.

Kumar, in a similar field of endeavor, teaches initiating communication without any call from a client application in order to update stored information (Kumar: abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Kumar for monitoring user request tendencies and prefetching resources automatically without application initiation. The teachings of Kumar, when implemented in the Bauch/Krishnamurthy/Shakib/Wei system, will allow one of ordinary skill in the art to monitor RPC requests and prefetch resources. One of ordinary skill in the art would be motivated to utilize the teachings of Kumar in the Bauch/Krishnamurthy/Shakib/Wei system in order to spread out updating cached resources so that resource requests are not bursty.

Regarding claim 14, this claim contains limitations found within that of claims 10 and 11, and the same rationale of rejection is used, where applicable.

Regarding claim 15, this method claim contains limitations found within claim 10 and 11, and the same rationale of rejection is used, where applicable.

Regarding claim 17, the Bauch/Krishnamurthy/Shakib/Wei/Kumar system teaches wherein the stored information includes response messages stored in the at least one

cache of the optimization layer (Krishnamurthy: abstract; Figure 3, item 303; col 3, lines 51-67 provides the cached item being validated is the response to the request).

Regarding claim 19, this method claim contains limitations found within claim 17, and the same rationale of rejection is used, where applicable.

Regarding claim 20, this method claim contains limitations found within claim 17, and the same rationale of rejection is used, where applicable.

Citation of Pertinent Prior Art

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Rajahalme et al (US 7,647,374 B2) disclose a SIP proxy that combines and separates certain SIP messages.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY NICKERSON whose telephone number is (571)270-3631. The examiner can normally be reached on M-Th, 9:00am - 7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571)272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. N./
Examiner, Art Unit 2442

/Asad M Nawaz/
Primary Examiner, Art Unit 2455